



## Programme Specification (UG)

Awarding body / institution:	Queen Mary University of London
Teaching institution:	Queen Mary University of London
Name of final award and programme title:	Foundation Certificate (FdCert) Chemical Sciences
Name of interim award(s):	
Duration of study / period of registration:	1 year
QMUL programme code / UCAS code(s):	FGH3, UCFF-QMSEFP1
QAA Benchmark Group:	
FHEQ Level of Award :	Level 3
Programme accredited by:	
Date Programme Specification approved:	13 Dec 2021
Responsible School / Institute:	School of Physical and Chemical Sciences

Schools / Institutes which will also be involved in teaching part of the programme:

School of Biological & Behavioural Sciences

School of Languages, Linguistics & Film

Collaborative institution(s) / organisation(s) involved in delivering the programme:

### Programme outline

The FdCert International Science and Engineering Foundation Programme (ISEFP Chemical Sciences) provides an alternative route onto a range of Chemistry-based undergraduate degrees. QMUL offers tailored pathways for subjects across science and engineering.

Our ISEFP Chemical Sciences is open to international students and face-to-face sessions are taught entirely at the Mile End campus by university staff. In-line with Queen Mary's 2030 Strategy, high quality learning resources and interactive sessions with academic staff will be available online. As a foundation student, you have access to all QMUL's facilities and will be a full-time student of the university.

Highlights:

- Opportunity to apply to chemical undergraduate degrees after completing the Foundation year at the appropriate level
- Study at campus-based university within easy reach of all of London's attractions

- Full access to all student facilities (academic, welfare, IT, library, social and sport)
- Experienced and well-qualified teaching staff, many of whom teach on undergraduate and postgraduate programmes

### Aims of the programme

The ISEFP Chemical Sciences will equip you with the skills and knowledge to undertake an undergraduate degree in chemical sciences. When you apply for the ISEFP you will choose a degree that you plan to study after completing the foundation year.

On successfully completing the ISEFP, and subject to meeting the progression requirements, you are guaranteed a place on your chosen degree programme at Queen Mary:

Chemistry BSc

Pharmaceutical Chemistry BSc

### What will you be expected to achieve?

- Pass 105 credits including SEF030 Communication in Science and Technology, SEF003 Introductory Chemistry, SEF004 A Closer Look at Chemistry and either SEF040 Mathematics A or SEF041 Mathematics B.
- Achieve an overall average of 60% with at least 50% in SEF003 Introductory Chemistry and SEF004 A Closer Look at Chemistry.
- For entry onto particular programmes there may be additional requirements. Please check the handbook or contact [fedu@qmul.ac.uk](mailto:fedu@qmul.ac.uk) for more information.

### Please note that the following information is only applicable to students who commenced their Level 4 studies in 2017/18, or 2018/19

In each year of undergraduate study, students are required to study modules to the value of at least 10 credits, which align to one or more of the following themes:

- networking
- multi- and inter-disciplinarity
- international perspectives
- enterprising perspectives.

These modules will be identified through the Module Directory, and / or by your School or Institute as your studies progress.

#### Academic Content:

A1	Introduction to organic chemistry: identification of functional groups and classes of organic compounds, organic nomenclature, the hybridisation approach to rationalising bonding, isomerism.
A2	Introduction to atomic structure: electrons, protons and neutrons, mass and atomic numbers, isotopes and radioactivity, measures of size of atoms and ions.
A3	Define the rate, order and activation energy of a chemical reaction and understand how catalysts affect the kinetics of reactions.

A4	Understand the basic principles of thermodynamics and carry out calculations on enthalpy changes in reactive systems.
A5	Mathematical topics such as algebra, functions, geometry and trigonometry, and an introduction to the techniques of calculus.

Disciplinary Skills - able to:

B1	present data in reports in a readily-assimilated fashion, and in accord with scientific conventions
B2	balance chemical equations and perform calculations relating mass, concentration and molar quantity.
B3	discuss the reactivity of a range of organic compounds, including alkenes, halogenated alkanes, aromatic and carbonyl compounds.
B4	understand a range of appropriate and relevant experimental techniques and how they are used; be able to perform some of them.

Attributes:

C1	To grasp the principles and practices of their field of study
C2	To produce analyses which are grounded in evidence
C3	To apply their analytical skills to investigate unfamiliar problems
C4	To work individually and in collaboration with others
C5	To develop a strong sense of intellectual integrity
C6	To acquire substantial bodies of new knowledge

### How will you learn?

#### Independent study

For every hour spent at university you will be expected to complete additional hours of independent study. Your individual study time could be spent preparing for, or following up on formal study sessions; reading; assessing data from experiments; completing lab reports; and revising for examinations.

The direction of your individual study will be guided by the formal study and laboratory sessions you attend, along with your reading and assignments. However, we expect you to demonstrate an active role in your own learning by reading widely and expanding your own knowledge, understanding and critical ability.

Independent study will foster in you the ability to identify your own learning needs and determine which areas you need to focus on to become proficient in your subject area. This is an important transferable skill and will help to prepare you for the transition to working life.

### How will you be assessed?

To pass a module, you must achieve an overall mark of 40% or above. The overall mark in most modules is based on your performance in both the examination and coursework, the weighting of these two components vary. You must also meet the necessary progression requirements in order to progress to the next year, at present this is a minimum of 60% average across all modules though this is subject to change.

### How is the programme structured?

Please specify the structure of the programme diets for all variants of the programme (e.g. full-time, part-time - if applicable). The description should be sufficiently detailed to fully define the structure of the diet.

The programme structure outlined below is indicative of what you will study. It may change slightly from year to year as new topics are introduced and after we have listened to current student feedback on teaching.

The ISEFP Chemical Sciences modules are designed to best prepare you for continuing your studies in chemical sciences at undergraduate level. You will take 8 modules in total over two semesters, starting in September.

#### Year Long Modules

Compulsory, depending on your previous Maths qualifications, either:

SEF040 Mathematics A (double module, runs across semester 1 and 2)

SEF041 Mathematics B (double module, runs across semester 1 and 2)

#### Semester 1

Based on your IELTS score, either:

SEF030 Communication in Science & Technology or

SEF009 English 1

#### Compulsory modules:

SEF003 Introductory Chemistry

SEF005 Physics – Mechanics and Materials

#### Semester 2

Only for those who take SEF009 in Semester 1:

SEF030 Communication in Science & Technology

#### Compulsory modules:

SEF004 A Closer Look at Chemistry

SEF007 Physics - Electricity and Atomic Physics

For those who take SEF030 in Semester 1:

SEF032 Molecules to Cells

### Academic Year of Study

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Communication in Science and Engineering (CST)	SEF030	15	3	Core	0	Semester 1 or 2
Introductory Chemistry	SEF003	15	3	Compulsory	0	Semester 1
Mathematics A	SEF040	30	3	Elective	0	Semesters 1 & 2

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Mathematics B	SEF041	30	3	Elective	0	Semesters 1 & 2
Physics - Mechanics and Materials	SEF005	15	3	Compulsory	0	Semester 1
A Closer Look at Chemistry	SEF004	15	3	Compulsory	0	Semester 2
Physics - Electricity and Atomic Physics	SEF007	15	3	Compulsory	0	Semester 2
English 1	SEF009	15	3	Elective	0	Semester 1
Molecules to Cells	SEF032	15	3	Elective	0	Semester 2

### What are the entry requirements?

The International Science and Engineering Foundation programme (ISEFP) is suitable for international students with qualifications up to AS-level/Year 12 or equivalent. The ISEFP accepts applicants with a wide range of different qualifications. The grades you need to enter the course will vary depending on the qualification you have completed. For country-specific details, please refer to our detailed entry requirements: <https://www.qmul.ac.uk/international-students/pathway-programmes/ify/ify-entry-requirements/>

You will need to provide the following documentation as part of your application:

Copies of your high school qualifications/transcript so far. This must show the subjects you are studying in your final year;

A copy of your UKVI IELTS (or accepted equivalent) certificate if you have taken it already;

A scanned copy of the data page of your passport (including any previous UK visas);

### How will the quality of the programme be managed and enhanced? How do we listen to and act on your feedback?

The Student-Staff Liaison Committee (SSLC) provides a formal means of communication and discussion between the School and its students. The committee consists of student representatives from each year in the School, together with appropriate representation from staff within the School. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. The Student-Staff Liaison Committees meets regularly throughout the year.

The Education Committee advises the School's Director of Education on all matters relating to the delivery of taught programmes at school level, including monitoring the application of relevant QM policies and reviewing proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in the committee's work in a number of ways, such as through consideration of student surveys and input from the SSLC.

All schools/institutes operate an Annual Programme Review of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Taught Programmes Action Plan (TPAP) which is the summary of the school/institute's work throughout the year to monitor academic standards and to improve the student experience. Students' views are considered in this process through analysis of the NSS and module evaluations.

### What academic support is available?

Each student is provided with an advisor who is their main point of contact for advice regarding academic matters and for assistance with pastoral concerns, throughout their whole programme. Students can see their advisors in their office hours or arrange an appointment via email. Moreover, if and when advisors are unavailable or cannot help with a specific problem, the

School has several Senior Advisors to assist with student concerns.

The School also operates a PASS programme for peer guidance.

### How inclusive is the programme for all students, including those with disabilities?

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites.

Students can access advice, guidance and support in the following areas:

- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one "study skills" tuition
- Ensuring access to course materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Mentoring support for students with mental health issues and conditions on the autistic spectrum.

### Programme-specific rules and facts

N/A

### Links with employers, placement opportunities and transferable skills

Upon completion of the ISEFP and following degree programme, graduates are equipped for a career in the chemical industry – one of the UK's largest – chemistry graduates are highly rated by business and finance employers for their data-handling and analytical skills.

93 per cent of our graduates are in work or further study within six months of graduation (HESA GOS 2017/18).

Recent Chemistry graduates have been hired by:

Hammersmith Medicines Research  
EY  
KPMG  
GlaxoSmithKline

## Programme Specification Approval

Person completing Programme Specification:

Sarahlouse Lawrence

Programme Title: FGH3 FdCert International Science and Engineering Foundation Programme (Chemical Sciences)

**Person responsible for management of programme:**

Dr Lesley Howell

**Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:**

13 Dec 2021

**Date Programme Specification approved by Taught Programmes Board:**

13 Dec 2021